



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/689,764	10/13/2000	Dan Anders Lindqvist	040020-308	8085
27045	7590	01/03/2005	EXAMINER	
ERICSSON INC. 6300 LEGACY DRIVE M/S EVR C11 PLANO, TX 75024			VO, DON NGUYEN	
			ART UNIT	PAPER NUMBER
			2631	

DATE MAILED: 01/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/689,764

Applicant(s)

LINDQVIST ET AL.

Examiner

DON N VO

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14-22, 24 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-22, 24 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Acknowledgment

1. This Office Action is responsive to the Amendment filed on 7/6/2004.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 7, 8, 10-12, 14-19, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Rich (5,940,452).

Regarding claims 1, 2, 18 and 19; as shown in figures 1, 7 and 11, Rich teaches a diversity receiver apparatus and method therefore comprising at least two receiver branches (114, 133, 135, 118, 126, 116, 137, 139, 120), means for evaluating (108) and means for selecting (108, 146, 148). See also column 4, line 62 to column 6, line 9; column 7, line 53 to column 9, line 67; column 10, lines 33-58; column 12, line 16 to column 13, line 49; column 22, lines 30-41; and column 28, line 60 to column 29, line 42.

Regarding claims 3 and 4, Rich further teaches attenuating the receiver branches. See column 8, lines 27-36; and column 9, lines 55-67.

Regarding claims 7 and 8, Rich further teaches amplifier (135, 139) in each of the receiver branch.

Regarding claims 10-12 and 14, Rich further teaches the evaluating means (108) having memory and selecting based on the comparison of the signal strength. See column 5, lines 31-58; column 9, lines 18-35; and column 10, lines 33-46.

Regarding claims 15-17, Rich further teaches the receiver as mentioned above is part of the transceiver that can be used in base station or radio unit. See column 6, lines 10-48.

Regarding claim 24, Rich further teaches demodulation of I/Q-pair and calculation of signal strength implies the calculation of signal amplitude of the I/Q-pair. See column 8, lines 46-67.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rich (5,940,452).

Rich teaches all subject matter claimed except for un-attenuating one of the receiver branches. See section 2 above. However, Rich teaches that the attenuations of the receiver branches are controlled by the controller (108) depending on the relationships of the receiver branches. See column 8, lines 27-36; and column 9, lines 55-67. That is, one of the receiver branches can be

Art Unit: 2631

chosen not to be attenuated if it is not necessary. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Rich for not to attenuate for one of the receiver branches if it is not necessary.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rich (5,940,452) in view of Tsumura (6,044,253).

Rich teaches all subject matter claimed except for further teaches that the attenuation means includes a resistor network. See section 2 above. However, implementing the attenuation means using the resistor network is well known in the art of digital communications. For example, see column 4, lines 2-6 of reference Tsumura. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Rich by implementing the attenuation means of Rich by using the resistor network as taught by Tsumura since it is just one way of implementing the attenuation means.

6. Claims 9 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rich (5,940,452) in view of Zastera (5,621,770).

Rich teaches all subject matter claimed except for further teaches providing digital filtering means in each of the receiver branches. However, Zastera, from the same field of endeavor and as shown in figure 2, teaches providing the digital

Art Unit: 2631

filters in each of the receiver branches for filtering the sampled signals. See column 3, lines 32-42. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Rich by providing the digital filters as taught by Zastera so the system performance can be enhanced since the digital filters will remove noises and provide desired signals.

Response to Arguments

7. Applicant's arguments with respect to claims 1-12, 14-22, and 24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References McDonald (5,109,392) and Akaiwa et al (5,710,995) are cited because they are pertinent to diversity receiver.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DON N VO whose telephone number is (571) 272-3018. The examiner can normally be reached on TUE - FRI (9:00-6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MOHAMMAD GHAYOUR can be reached on (571) 272-3021. The fax

Art Unit: 2631

phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DON N VO
Primary Examiner
Art Unit 2631